

REMARKS

In response to the Office Action of January 1, 2006: claims 1-14 have been withdrawn and are the subject matter of a concurrently filed continuation application; paragraphs [0002], [0014], [0023], [0030], [0033], [0034], [0035], [0037], [0041], [0042] and [0045] have been replaced; claims 1-14 withdrawn; claims 15, 18, 22, 23,24, 27 and 28 amended; claims 17, 19, 20, 21, 25, 26, 30, 31 and 32 cancelled; new claims 33-38 added; and drawing Figures 2 and 3 slightly revised.

With regard to the replaced paragraphs [0002], [0014], [0034], [0035], [0037] and [0045], the reference to "co-pending application serial No. 09/736,916" is changed to U.S. patent No. 6,687,007 B1". The change in paragraphs [0023], [0030], [0033], [0041] and [0042] are to correct typographical errors. With reference to, for instance, Figures 4 and 5 in paragraph [0041], it is obvious that the third zone 115 is coated to reflect substantially 100% of the incident light, not first zone 111. No new matter has been added.

In Figure 2, "55" (occurrence above the beam splitter 49) has been changed to 53 to conform to the specification (e.g. [0034]). The same change has been made to Figure 3. No new matter has been added.

As claims 1-14 have been withdrawn, no response is necessary to the rejections based on Frosch (U.S. patent No. 4,181,440), Soliz et al. (Pub No. US 2004/008542 A1), and Soliz et al. considered with Nettleton (GB 2 317 1446 A).

With regard to the § 112 rejections, claim 15 has been amended to delete "means to process wavelengths of electromagnetic radiation to produce an interferogram" and replace such language with "for producing a spectral and spatial image from wavelengths

of electromagnetic radiation to produce an interferogram". Claim 20 has been combined with claim 15 and rewritten as new claim 33. Claims 31 and 32 have been cancelled.

As claim 15 has been amended to incorporate the subject matter of, inter alia, claim 17, it is submitted that the rejection based on Meigs (U.S. patent No. 6,687,007 B1) should be withdrawn.

As claim 20 was not rejected on the basis of any prior art and as it has been combined with the subject matter of claim 15 (Currently Amended) as new independent claim 33, it is submitted that the claim is now in condition for allowance. This is also true for dependent claims 22 and 34-38.

The rejection of claim 15 (Currently Amended) as being unpatentable over Nettleton is traversed. Nettleton discloses an instrument comprising a dispersive spectrometer (e.g. a prism spectrometer) combined with a Sagnac interferometer to produce a spectra v. spectra interferogram. Figure 1 of Nettleton discloses a "well known linear detector array dispersive spectrometer". See page 4. The advantages and disadvantages of such an instrument are set forth on pages 5 and 6. Figure 2 of Nettleton is directed to a "well known linear detector array Sagnac interferometer Fourier transform spectrometer". See page 6. The advantages and disadvantages of this instrument are set forth on pages 9-11. Nettleton's invention is described in reference to his Figure 3. In that figure a dispersive spectrometer and a Sagnac interferometer are combined with a 2 dimensional detector array such that the dispersion of the dispersive spectrometer is in the x-direction and the dispersion of the interferometer is in the y direction to produce a spectra v. spectra interferogram. See p. 11 and the right hand side of Figure 3. No spatial data is preserved. Thus, in addition to not disclosing a pair of gratings, Nettleton does

not disclose "means positioned along said optical path to create an interferogram for each spatial location from said aperture onto said detector."

As claims 16, 18 and 23, 24, 27 and 28 depend from claim 15 they are likewise not obvious in view of Nettleton. Reliance on Soliz et al. does not overcome the failings of Nettleton.

In view of the foregoing it is respectfully submitted that this application is now in condition for allowance.

Respectfully submitted,

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